

**39th World Congress of the International Institute of Sociology.
Erevan, June 11-14, 2009**

Decoding geographical health inequalities: a critical approach.

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Abstract

During the last ten years, many studies dealing both with health and its inequalities, based on a geographical approach, have been carried out in the USA and in Europe. Generally this kind of approaches does not take into account population social specifications as they only deal with community criteria such as (the amount of) social and health equipments available or general average data on/concerning economic or health levels. The purpose of this study is to show – by means of a critical approach Land taking the French Nord-Pas-de-Calais area as an example – that health conditions differences observed in France between regions are essentially relying on the nature and weight of social health inequalities. The very poor health condition of the population there actually derives from much higher level of social health inequalities. The reasons for this very high inequality are still to be found.

Keywords. Geographical health inequalities – A critical approach

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Introduction

Over about the last decade numerous health studies have been conducted in the United States and Europe (particularly the United Kingdom) using a geographical approach based on location and environment. The authors have tested various hypotheses regarding the effects of local circumstances on the health of the population. This type of strategy includes so-called ecological studies that compare mortality and morbidity in inhabitants of specific regions, and contextual studies that use multilevel analysis to relate the socio-economic context to health data, and studies comparing small numbers of well-defined places. Addressing questions about the influence of the community, the environment and the general health-related context requires consideration of a series of concepts and hypotheses that have been put forward in attempts to explain how **individual** and **community** factors can affect well-being. It may involve combining a variety of research techniques and must avoid reductionism when taking account of community factors in models of causes of death and in qualitative analysis.

New interest in the geographical approach

Investigation of geographic variations in health has a long history, and European researchers have for many years had the opportunity to assess differences in mortality between rich and poor neighbourhoods. However, 'health geographers' rarely discuss this historical dimension of health and inequality, preferring to analyse current data using current techniques, with all the methodological and theoretical assumptions that go with them.

Factors underlying the recent surge in interest in the geographical approach include a new understanding of the determinants of health and inequality, and the recognition that social factors influence health via several different mechanisms that fall under the umbrella of location (1). However, that enthusiasm (particularly marked among epidemiologists), was quickly countered by strong criticism from the proponents of approaches focussing on individual characteristics (2); the principal question that arises in this context is: can community context have an impact independent of individual attributes?

The emergence of new methodological techniques such as multilevel analysis has stimulated empirical research and considerations of theory, all of which increase the legitimacy of the geographical approach. In addition, there is a growing recognition among social scientists (particularly in the United States) in the field referred to as 'segregation and urban poverty', as well as among bodies responsible for healthcare

planning and provision, that studies of this type can be useful in the implementation of social and educational programmes that include a health dimension (3).

Similar changes are occurring in continental Europe, though rather later than in the United States and United Kingdom. In fact, despite the availability of reliable differential mortality data, interest in social health inequality remains very low in certain countries. The need to respond to the WHO's official recommendations has prompted European organisations to adopt reduction of inequality as a goal, but initiatives to achieve it are relatively rare (other than preventive measures, which often end up increasing health inequalities).

Why take a geographical approach to social health inequalities?

The question being addressed here is not so much why the geographical approach to social health inequality is interesting, but rather what, on a theoretical level, it offers beyond political or pragmatic considerations. Does it provide unique information and, if so, why? A true debate must be opened on the various points raised by these questions. It is unfortunate that a discussion has not yet begun, because inequality is increasing while recognition and understanding of it seems to be diminishing.

In fact, most serious studies in this field, whatever the approach adopted, are essentially concerned with the same issue - the genesis and nature of social health inequality. Researchers who assume that an environment or social context is relevant other than in its effect on the people who live there must try to assess how - after taking account of individual factors such as income, social category, and level of education. Results vary according to the relative weight given to individual and environmental factors and according to the sophistication of the methods implemented. Because of the emphasis on environment, studies using a geographical approach often neglect individual characteristics.

Sarah Curtis, a well-known British health geographer, recently showed that area of residence (particularly at a very early age) affects health (chronic diseases reported at the time of the sampling) along with individual characteristics (4). When the list of variables considered under each of the two headings (individual and geographical) is examined, context variables are numerous and often synthetic, retrieving fixed indicators that reflect the wealth or poverty of the area concerned.

The 'Carstairs' index (5) contains measures of housing over-population, unemployment, membership of a low social class and a lack of car in the home. All these variables may simply be called individual and be collected in individual questionnaires at the time of surveys intended to measure and help elucidate social health inequalities. Thus others index deprivation were built, for example the aim was to assess the relationships between social and material deprivation and the use of tobacco, excessive alcohol and psychotropic drugs by both sexes and in various age groups. Increasing levels of deprivation were associated with a greater likelihood of tobacco use, alcohol abuse and frequent psychotropic drug intake (6).

Important as individual socio-economic variables (social class, renter/owner status, marital status, employment or unemployment) may be, they cannot account for all the differences observed in mortality and morbidity.

Clearly, the availability of data from various private and public sources influences how studies are conducted. The alternative is to hand out a questionnaire to the population of interest. It is disappointing that so-called context or environment is a social reality that determines the living conditions and way of life of the people there. It should also be borne in mind that yesterday is as important as today; social reality in a given geographical area is the product, over time, of a community history comprising all the individual histories of the population.

Further consideration of variables affecting so-called individual characteristics would doubtless show an even stronger relationship with health status. This is precisely the question: why not do it when we can? Why not acknowledge that we rely on variables in environment or context because there is no alternative? However, that is not usually a consideration. The geographical approach is frequently adopted because it is presented as heuristic, whereas its foundation is in fact a social analysis that is often summary, sometimes to the point of caricature.

Furthermore, characteristics presented as relevant individual variables are not necessarily so. Addressing questions of social inequality is a matter of measuring and analysing differences in values (income, heritage, knowledge, health, social success etc.) among hierarchical social groups (social classes, socio-professional categories). Inequality concerns not individuals as such, but the overall social structure. The difficulty, of course, is to differentiate hierarchical groups in such a way as to optimise the hypotheses that can be tested concerning the structure of the social body. Social inequalities in health are the result of a wider lack of social fairness - striking examples of the manner in which handicaps and difficulties (and privileges and advantages) are largely determined at birth. Ironically, perhaps, the

difference is most apparent at the other end of life. Death - formalised as mortality (or life expectancy) is our best measure of inequality and social injustice.

We must not attempt to measure and understand social health inequity, whether approached geographically or not, through any one indicator (income or level of education, for example). Possible differences between locations or geographical areas must be thought of as having their sources in differences between social groups located in the same places. It is clear that considerable regional differences in mortality have long existed in certain European countries but having taken account of age, sex and socio-professional factors, is there in fact a geographical inequality as such? If so, what is its nature? If not, how do we explain the differences?

Danger of a culturalist regional approach

A study performed in northern France showed that what might appear to be a geographical health inequality was in fact due to greater inequality within socio-professional categories than in other French regions (7). The question asked initially (why are people in the 'Nord pas de Calais' at increased risk of cancer?) then became: why is there greater social health inequality in this region than elsewhere (in particular with regard to cancer)? What underlies the high death rate among employees and workers?

Interviews with local health providers and researchers always produced the same response: the presence in the region of classic risk factors - poor nutrition, tobacco and (particularly) alcohol intake, some pollution, but very little mention of occupational risk. Remarks included: 'people here don't pay attention to anything, they don't behave as they should, they love drinking, eating and parties, they are stubborn about sickness and do not seek healthcare properly or quickly enough.'

Difficult living conditions and unemployment were sometimes evoked, but they were still used to support the view that a lack of ambition, mobility, or will to overcome extreme situations leads to psychological states that generate cancers. This manner of explaining the particularly poor situation of the region doubtless had the force of evidence, as the literature showed the population to be at risk due to a diet very high in fats and sugar, a high rate of smoking, and considerable alcohol consumption.

However, in-depth analysis of mortality data showed that the differences between this region and the rest of France could be explained by socio-professional factors. In 1987-1993, a relatively high death rate was observed among men aged 25-54 (compared with the average for the identical socio-professional category in other French regions) of: 31% for employees/workers, 12% for intermediate categories, and less than 5%, for upper management and liberal professions.

If the level of social inequality with regard to death was equal to the average French level, this region was located with the average for French regions in the matter of mortality. A different approach was required, one that took account of social inequality in its historical context and of the lives of the people concerned - particularly those of labourers in mines, metallurgy and textiles.

Conclusion/discussion

The geographical or ecological approach to health inequality seems to fail for lack of theoretical foundation underpinning notions used in the surveys. A distinction can be drawn between content and context, the effect of the context on health being what remains of geographical variation after consideration of the characteristics of the population. This raises three problems (8):

- (I) Individual characteristics are in part determined by geographical factors used in models (particularly multilevel models);
- (II) Modifiable health variables (smoking, alcohol intake, physical activity, respiratory function) are used without due regard to the fact that they are often the product of social context and,
- (III) Most importantly, the lack of attention being paid to developing theories to explain the mechanisms that connect area of residence with health-related behaviour and health status. Social composition and the context are often presented as different notions and do not pose a particular problem, while the underlying explicative models remain implicit

For Sloggett and Joshi (9), location (of various sizes and forms) can be seen as a black box containing some sort of 'social miasma' that has a harmful effect on health. Other authors refer to the epidemiological conception of 'place' as an entity that influences health without the need to directly analyse the roles played by cultural and social factors (particularly those related to living conditions) (10). Of course, the variety and nature of factors with a potential effect on 'geographical' differences in health depend on the characteristics of the localities under scrutiny, particularly their size. A comparison between neighbourhoods of a city is not like a comparison between neighbourhoods of different cities, and even less like comparisons between cities, departments or regions. The histories of places, and especially of their inhabitants, vary, and conditions and lifestyles differ greatly, even when communities

have much in common in terms of social health inequality (differences between categories or social classes are similar but their range varies according to the size and the nature of the places compared). Sally Macintyre (11) proposes adding a third notion to composition and context - a collective dimension reflecting the cultural and historical traits of communities. This 'explanation' would emphasise shared norms, traditions, values and interests, thus adding an anthropological dimension to the socio-economic, psychological and epidemiological considerations addressed in geographical approaches. While approving of that approach, we do not see the need to maintain a separation between context and the collective dimension, which does nothing but enlarge the context by including historical and socio-anthropological aspects.

The approach we offer rests on the theory that social health inequality is essentially the final product of other social inequalities (12). We see this as a continuum that runs throughout life, from birth to advanced age, and results in increased risk of serious illness and premature death among people who have faced the greatest difficulties in life with the least resources. The most serious handicaps they have to bear relate to the impact of the environment, particularly poor working conditions, on their physical health.

That is why we opt for an approach that focuses on living conditions and lifestyle issues that relate to social health inequality. The individual joins the collective and the notion of context fades in favour of research into living conditions (past and present) of social groups in the areas studied.

Epidemiological approaches must consider the nature of pathologies underlying inequality. Aetiological factors vary enormously in effect and time-course, as is very well reported by proponents of the life-long so-called materialistic approach ('the life course') (13) to the production of social health inequalities (14). Unfortunately, this is not the dominant strategy used in ecological or geographical studies of social health inequality. It is easy to see why the psychosocial approach seems to have put air in the sails of international institutions such as the World Bank, and of politico-administrative entities in France. In no way does it highlight the true structural determinants of social inequality and thus of the health inequalities it produces.

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